REMARKS

In order to place this application in condition for a complete action on the merits, the specification has been suitably revised to correct informalities and to place it in better conformance with U.S. practice. Claims 1-6 have been amended in formal respects to improve the wording and bring them into better conformance with U.S. practice. Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached pages are captioned "**VERSION WITH MARKINGS TO SHOWN CHANGES MADE**."

To obtain a fuller scope of coverage, new claims 7-14 have been added. Adequate support for the subject matter recited in these claims may be found in the specification as originally filed.

Early and favorable action on the merits are respectfully requested.

Respectfully submitted,
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"VERSION WITH MARKINGS TO SHOW CHANGES MADE"

IN THE SPECIFICATION:

Paragraph beginning at line 8 of page 1 has been amended as follows:

[An] A conventional apparatus for [implementing readout of a] reading a fingerprint [conventionally known] uses a capacitance-type semiconductor sensor for detecting a skin asperity forming the fingerprint based on [of a fingertip from] a difference in the capacitance [size] between the fingertip and a plurality of microelectrodes of the readout apparatus.

Paragraph beginning at line 13 of page 1 has been amended as follows:

In this conventional technique, [only] an insulation film having [of] a thickness of only approximately 1μm is provided between the fingertip and the plural microelectrodes of the semiconductor sensor of the readout apparatus. Therefore, there is a problem in that [an] electrostatic withstand [pressure] ability is low, and [that an] insulation breakdown easily occurs due to static electricity. Furthermore, there is another problem in that the manufacturing cost is high since the apparatus needs a

semiconductor sensor with a size of 1.5 cm x 1.5 cm or more to implement the readout of the fingerprint on a detecting surface with a size of approximately 1.5 cm x 1.5 cm.

Paragraph beginning at line 9 of page 3 has been amended as follows:

Fig. 1 is a perspective view showing readout apparatus of an embodiment of the present invention. Fig. 1 shows a transparent base plate 1 for implementing a touch-and-move operation of a finger; a housing 2 for accommodating a light source, an equal magnification lens, and an image sensor; and a base plate 6 for fixing the image sensor.

Paragraph beginning at line 14 of page 3 has been amended as follows:

Fig. 2 shows the inner sectional surface A according to the present embodiment. Referring to Fig. 2, a light irradiated from a light source 3 undergoes irregular reflection on the surface of a finger 7. The reflected light forms an image on an image pickup surface of an image sensor 5 via an equal magnification lens 4. Since the image pickup surface of the image sensor 5 is of a slim rectangular shape, the surface can form only a part of the image of the fingerprint which has been formed via the equal magnification

lens 4. However, when implementing a touch-and-move operation of a finger on the transparent base plate 1, the image sensor 5 can implement [the] readout of the [whole image of the] entire fingerprint with the image sensor 5. In the case of Fig. 2, the asperity of the fingerprint can be read [by] based on the contrast of the reflected light, which has undergone irregular reflection, wherein the contrast is usually low. However, this configuration makes it possible to easily implement the readout of books or manuscripts. An LED is used as the light source and when the LED employs a visible light or an infrared light including a plurality of colors such as green or blue without restricting the color to a single color such as red, the LED can implement the readout of various conditions of [a] the skin. The image sensor 5 is usually [employs the image sensor] composed of single crystal silicon. However, when employing [the] an image sensor composed of amorphous silicon, this invention can employ a long image sensor or an image sensor without the equal magnification lens.

Paragraph beginning at line 11 of page 5 has been amended as follows:

Fig. 7 designates the base plate 6 and the image sensor 5 disposed thereon. The image sensor 5 includes an image pickup surface 8 composed of a plurality of rows of

photoreceptors linearly disposed thereon. In a preferred embodiment, a length of the respective rows is more than ten times larger than a length of columns of the photoreceptors.

Paragraph beginning at line 13 of page 5 has been amended as follows:

As described above, the present invention can improve the electrostatic withstand [pressure] ability without being affected by static electricity. Furthermore, the present invention can reduce the manufacturing cost of the fingerprint reading device, because [this] invention applies an image sensor of a slim piece for implementing the readout of the fingerprint, and it is configured to implement touch-and-move of a finger on the transparent base plate. Still further, the present invention can implement the readout of manuscripts such as magazines as well as fingerprints. Therefore, the present invention can further implement the readout of URLs and the like or business cards.

IN THE CLAIMS:

Claims 1-6 have been amended as follows:

1. (Amended) An apparatus for implementing readout of a fingerprint, comprising:

a transparent upper base plate having a contact surface that is touched during use by a fingertip of a person;

a light source for irradiating the contact surface with light such that a portion of the light is reflected when the fingertip touches the contact surface;

an equal magnification lens for forming an image of the person's fingerprint [of the fingertip from] based on the reflected light with [in] equal magnification;

an image sensor [for detecting the fingerprint formed into an image] having [by] an image pickup surface comprised [composed] of a plurality of photoreceptors linearly disposed thereon for detecting the image of the fingerprint;

a lower base plate for holding the image sensor in a fixed position relative to the equal magnification lens; and

a housing for holding [fixing] the transparent base plate, the light source, the equal magnification lens, and the upper and lower base [plate] plates.

2. (Amended) An apparatus for implementing readout of a fingerprint according to claim 1;[,] wherein the angle of reflection of the reflected light with respect to the fingertip [fingerprint forming an image on the image pickup surface of the image sensor] is larger than or approximately equal to the angle of incidence of the light emitted by the light source onto the contact surface.

3. (Amended) An apparatus for implementing readout of a fingerprint according to claim 1; wherein [in] the image pickup surface of the image sensor has a plurality of photoreceptors arranged in rows, and [,] a [transverse] length [X corresponding to] of the rows [the row length] is more than ten times larger than a [longitudinal] length [Y corresponding to] of columns of the photoreceptors [the column length].

4. (Amended) An apparatus for implementing readout of a fingerprint according to claim 1;[,] wherein the light source is composed of LEDs of two or more colors [or more].

5. (Amended) An apparatus for implementing readout of a fingerprint according to claim 1;[,] wherein the image sensor [pickup device] is formed of amorphous silicon.

6. (Amended) An apparatus for implementing readout of a fingerprint according to claim 1; [,] wherein the angle of incidence of the light [irradiated] by the light source onto the contact surface [light with respect to the fingerprint,] is smaller than or approximately equal to the angle of reflection of the reflected light [with respect to the fingerprint forming the image on the image pickup surface of the image sensor, or the angle of incidence is smaller than the angle of reflection].